FEASIBILITY COMPLETENESS CHECKLIST – CHAPTER NR 512

Outline of Requirements for Feasibility Completeness Determination

Refer to Applicable Statutes and Codes for Exact Requirements

General Information

Facility Name: _____

Facility Type: _____

Initial Submittal: Date Received: ____/____/____ Completeness Due: ____/____/____ DNR Response: ____/____/____ (Complete: __ yes __ no)

Addendum # __ Date Received: ____/____/____ Completeness Due: ____/____/____ DNR Response: ____/____/____ (Complete: __ yes __ no)

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Addendum # __ Date Received: ____/____/____ Completeness Due: ____/____/____ DNR Response: ____/____/____ (Complete: __ yes __ no)

Proposed Waste Types: _____

Proposed Total Design Capacity: _____(including daily and intermediate covers)

Has the assigned DNR hydrogeologist started to fill out a ***Feasibility Internal Procedures*** form for this project? **Y** **N**

FEASIBILITY REQUIREMENTS	COMPLETE?			LOCATION	COMMENTS
	Y	N	NA		
INITIAL SITE REPORT - S. NR 500.04					
(1) Has the department rendered an initial site report opinion? __ yes __ no Date:					
(2) Has an optional pre-feasibility report been submitted? __ yes __ no Date:					
GENERAL SUBMITTAL REQUIREMENTS - s. NR 500.05					
(1) Has the adequate review fee specified in s. 520.04 been submitted?					
(2) Has a cover letter detailing the desired action been submitted?					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(3) Have 5 copies (2 Regions, 3 Central Office) been submitted to the department?					
(4) Are the report and plan sheets submitted under the seals and certifications of a P.E. and P.G.?					
(5) Technical Procedures:					
Were all test procedures specified in the report?					
Were all technical procedures used to investigate the facility current standard procedures?					
Were explanations and reasons given for deviations from the current standard procedures?					
(6) Do all maps, plan sheets, drawings, isometrics, cross-sections, figures, photographs and tables meet the following requirements?					
(a) No larger than 24 inches x 36 inches & no smaller than 8 ½ inches x 11 inches.					
(b) Appropriate scale to show required detail.					
(c) Do visuals meet the following requirements? __ numbered __ legends for all symbols __ referenced in the narrative __ horizontal & vertical scales __ titled __ drafting and origination dates					
(d) Were uniform scales used?					
(e) Were north arrows shown?					
(f) Was a USGS datum used as basis for all elevations?					
(g) Do visuals contain a survey grid based upon monuments established in the field and which is referenced to the state plane coordinates?					
(h) Is the original topography and a grid system shown on the plan sheets that show construction, operation and closure topography?					
(i) Do cross-sections meet the following requirements? __ Show survey grid locations, __ Reference major plan sheets, __ Include a reduced diagram of plan view showing cross-section location.					
(7) Was a table of contents provided listing all sections of the submittal?					
(8) Was an appendix provided listing the following? __ names of all references __ all raw data, __ testing and sampling procedures __ calculations					
LOCATIONAL CRITERIA - NR 504.04(3) Does the report indicate that the proposed limits of filling are within:					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(a) 1,000 feet of any navigable lake, pond or flowage? __ yes __ no __ If yes, was an exemption requested?					
(b) 300 feet of any navigable river or stream? __ yes __ no __ If yes, was an exemption requested?					
(c) A 100-year flood plain? __ yes __ no Note: Exemptions to this requirement are <u>not</u> granted.					
(d) 1,000 feet of any state trunk highway, interstate or federal aid primary highway or any public park? __ yes __ no __ If yes, was a line of sight study provided showing that the landfill would not be visible from the road or park or, __ was an exemption requested?					
(e) 10,000 feet of the end of an airport runway designed or planned to be designed and used by turbojet aircraft or within 5,000 feet of any airport runway designed for and used by piston type aircraft? __ yes __ no					
Is FAA notification is required? __ yes __ no Note: If the proposed limits of waste filling would be within <u>5 miles</u> of the end of runway of any airport used by turbojet or piston type aircraft, the applicant must provide notice to both the Federal Aviation Administration (FAA) and the affected airport. The report should contain all correspondence related to the notices including any determinations made by the FAA.					
(f) 1,200 feet of any water supply well (i.e. public, private, irrigation or stock water supply wells)? __ yes __ no __ Were exemption(s) requested? __ yes __ no If yes, have the following been provided for each identified well? __ well location __ former and present well owner __ well driller __ well construction log Note: Exemptions may not be granted if the above information is not provided.					
(g) Within 200 feet of a fault that has had displacement in Holocene time.					
(h) Within seismic impact zones.					
(i) Within unstable areas.					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
PERFORMANCE STANDARDS NR 504.04 (4) Does the report indicate that the proposed landfill or any proposed noncommercial soil borrow source(s) will have:					
(a) A significant adverse impact on wetlands? __ yes __ no					
Has a practicable alternatives analysis and a wetland functional values analysis been completed in accordance with ch. NR 103, if a wetland will be affected by the proposed landfill or any proposed noncommercial soil borrow source activity? (See DNR guidance for the solid waste program on NR 103.)					
(b) A significant adverse impact on critical habitat areas? __ yes __ no If required, has a critical habitat study been submitted? __ yes __ no __ NA					
(c) A detrimental effect on any surface water? __ yes __ no Note: exemptions are <u>not</u> granted					
(d) A detrimental effect on groundwater quality or will cause or exacerbate an attainment or exceedance of any preventive action limit or enforcement standard at a point of standards application? __ yes __ no					
Has the applicant requested an exemption to the groundwater standards in accordance with ss. NR 507.29 and NR 140.28, Wis. Adm. Code? If an exemption is required, does the feasibility report include: a) A list of the specific wells and parameters for which an exemption is being requested. b) A discussion of how the criteria listed in s. NR 140.28(2), (3) and (4) are met.					
(e) The migration and concentration of explosive gases in excess of 25% of the lower explosive limit for such gases at any time? __ yes __ no					
(f) The emission of any hazardous air contaminant exceeding the limitations for those substances contained in s. NR 445.03? __ yes __ no					
GENERAL SUBMITTAL REQUIREMENTS - s. NR 512.05					
(1) Does the report include responses to the department's review comments on the initial site report or any applicable pre-feasibility report?					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(2) Does the report contain justification for requests for any exemptions to the locational and performance standards listed in s. NR 504.04?					
(3) For an alternative design to s. NR 504.05 requirements, does the report include an analysis to predict whether the facility will meet or exceed performance standards of s. NR 504.04(4)(d) regarding groundwater quality?					
PROCEDURAL REQUIREMENTS - s. NR 512.06					
(1) Local approvals*:* Does the report contain the following:					
(a) Documentation that each affected municipality (towns, villages, cities, and counties) has been notified and that application has been made for applicable local approvals, at least 120 days prior to submittal. **Note: ACT 241, effective June 18, 1998 changes the definition of affected municipalities. The new law defines affected municipality as a town, city, village or county within 1,500 feet of the facility.**					
(b) A copy of all requests for the specification of applicable local approvals.					
(c) Responses from all affected municipalities regarding any applicable local approvals.					
(d) The standard municipal notice required by the waste facility siting board.					
(e) Follow up applications for any applicable local approvals submitted to the clerk of the governing board of each participating municipality per s. 289.23(2), Stats.					
(2) Documentation of and when copies of the ISR, the ISR opinion, any applicable pre-feasibility report, and the feasibility report have been submitted to each participating municipality under s. 289.33(6)(b), Stats.					
GENERAL FACILITY INFORMATION - s. NR 512.07 Does the report include all of the following?					
(1) Project title					
(2) Name, address and phone number of primary contacts, including the landfill's owner, operator and any consultants					
(3) Present property owner					
(4) Proposed owner and operator					
(5) Proposed landfill location by ¼ -¼ section					
(6) Total acreage of property					
(7) Total acreage of proposed fill area					
(8) Proposed design capacity					
(9) Proposed site life in years					
(10) Anticipated date of closure					
(11) Municipalities and industries to be served					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(12) Anticipated waste types and characteristics					
(13) Anticipated volumes of each major waste stream and any seasonal fluctuations taking into account waste reduction, reuse, recycling, composting and the recovery of energy from solid waste					
(14) Anticipated cover frequency					
(15) Mode of operation					
(16) Anticipated sub-base, base and final grades					
(17) Preliminary design concepts					
LAND USE INFORMATION - s. NR 512.08					
(1) Does the report include a thorough discussion of <u>any changes</u> in land uses or zoning within one mile of the proposed limits of filling since the submittal of the ISR?					
(a) Does the report include a discussion of any changes in the identification of adjacent landowners discussed? Note: this information may be presented on a plat map if it accurately shows current land ownership conditions.					
(b) Are any changes in zoning discussed?					
(c) Are any changes in present land uses discussed with emphasis on known recreational, historical, archaeological or state/local natural areas, county forest lands, and critical habitat?					
(d) Are any changes in existing and/or proposed transportation routes and access roads, including any new weight restrictions, discussed?					
(e) Does the report include any information or bird study requested by the Department or the FAA. Note: This applies only if the owner proposes to accept putrescible waste and the limits of filling are within 5 miles of the end of an airport runway. [see also s. NR 504.04(3)(e)]					
SITE-SPECIFIC GEOTECHNICAL INFORMATION - s. NR 512.09					
Has an alternate geotechnical investigation program been approved by the department in writing? __ yes __ no __ If yes, does the report include justification for the approved alternative geotechnical investigation program?					
(1) Borings: Have borings been made both inside and outside the proposed limits of filling?					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(a) Have the required number of borings been completed in or within 300 feet of the proposed limits of filling? i. 10 borings for the first 5 or less acres of proposed fill area ii. 2 additional borings for each additional 5 or less acres of proposed fill area _____ Proposed limits of filling in acres _____ Number of borings required _____ Number of borings made within 300 feet of proposed limits of filling					
(b) Do all borings extend at least 25 feet below anticipated sub-base grades? Note: For borings located outside the proposed limits of filling, applicable sub-base grade is the elevation of the bottom of the proposed base liner nearest to the borehole.					
(c) Has 1 boring been extended at least 5 feet into bedrock, if bedrock is within 50 feet of the lowest elevation of the proposed sub-base grades? Was bedrock drilling performed in accordance with ch. NR 141 and s. NR 507.05?					
(d) Were samples collected and retained and borings logs prepared in accordance with ss. NR 507.05 and 507.14?					
i. **Fine-grained soils:** Was continuous sampling to 25 feet below sub-base grades performed?					
ii. **Coarse-grained soils or following continuous sampling in fine-grained soils:** Were samples collected from each major soil unit and at maximum 5 foot intervals?					
iii. **Sample at the depth of well screen:** Was a soil sample collected at the depth of the well screen of any subsequently placed monitoring well and analyzed for grain size distribution using mechanical and hydrometer methods and Atterberg limits, as appropriate for the soil type?					
iv. **Bedrock samples:** Were continuous core samples collected?					
v. ***Soil samples:*** Do descriptions of each major soil sample unit include? ____ Structure ____ Lenses ____ Mottling ____ Geologic origin ____ Voids ____ USCS classified ____ Layering					
vi. Do descriptions of continuous bedrock core samples include? ____ General rock properties ____ Rock Quality Designation (RQD) ____ Fracture frequency ____ Percent recovery					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
vii. Does the report contain a boring log for each boring that includes the following? ____Elevations of land surface and bottom of boring corrected to USGS (national geodetic survey) datum ____If converted to a well, water level at the time of drilling, date of water level measurement, and a well construction diagram on the boring log					
viii. Have all borings not converted to wells been abandoned in accordance with ss. NR 507.08 and 141.25 and been documented as instructed on Department forms (3300-5B)?					
(2) Groundwater Monitoring Wells:					
(a) Have the required number of ***water table observation wells*** with screens intersecting the water table been installed to adequately define the water table surface? i. 5 water table observation wells for the first 5 or less acres of proposed fill area ii. 1 additional water table observation well for each additional 5 or less acres of proposed fill area ____ Proposed limits of filling in acres ____ Number of water table observation wells required ____ Number of water table observation wells installed					
(b) Have the required number of ***piezometers*** been installed? i. 1 piezometer adjacent to a water table observation well at 2 separate locations for the first 5 or less acres of proposed fill area ii. 1 additional piezometer for each additional 10 or less acres of proposed fill area to create additional well nests iii. At least 1 well nest within the proposed limits of filling for every 20 acres of proposed fill area ____ Proposed limits of filling in acres ____ Number of piezometers required ____ Number of piezometers installed					
(c) ***If the proposed site is in a fine-grained soil environment*** does each well nest required above in (b) consist of 3 wells (a water table observation well, a piezometer installed at or just below the proposed subbase grades and a deeper piezometer installed at least 15 feet below the bottom of the upper piezometer's well screen?					

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(d) Are all wells located ***no more than 300 feet*** from the proposed limits of filling and are at least half of the wells located no more than 150 feet from the proposed limits of filling?					
(e) Are all wells designed, installed, developed, documented, and sampled in accordance with ch. NR 141 and ss. NR 507.06, 507.07, 507.14 and 507.17, or have alternative methods of well design and installation been approved by the department prior to well construction?					
(3) **Field Direction:** Did a Professional Geologist (P.G.) or qualified technician directly supervised by a P.G. perform the following tasks? ___Observe and direct drilling of all borings ___Observe and direct installation, development and abandonment of all wells ___Conduct all in-field hydraulic conductivity tests ___Visually describe and classify all geologic samples					
(4) **Laboratory and Field Analysis:** (a) Have 5 grain-size analyses per major soil unit (mechanical & hydrometer) with USCS classifications and Atterberg limits where appropriate been provided? _____ Number of major soil units _____ Number of grain size analyses required					
(b) Have ***lab hydraulic conductivity tests*** been provided for 2 undisturbed samples from each major fine-grained soil unit?					
(d) Have ***in-field hydraulic conductivity test*** data and results been provided for each well?					
(e) Does report include 6 monthly water level measurements for all wells?					
(f) Does report include 6 monthly surface water level measurements for any surface water bodies including streams, lakes, ponds, drainage ditches and wetlands located within 1,000 feet of the proposed limits of filling?					
(g) ***Baseline groundwater quality*** for all wells located outside the proposed limits of filling in accordance with s. NR 507.18: NOTE: If a groundwater standard is attained or exceeded in any of the 4 baseline groundwater quality sample rounds, see ss. NR 140.28 and 507.29 for exemption criteria.					
(i) 4 monthly rounds for each detection monitoring parameter listed in Appendix 1, Tables 1 and 2 of ch. NR 507, as appropriate, for the particular waste types to be accepted.					
(ii) 4 monthly rounds for Public Health and Welfare parameters listed in Appendix I, Table 3 of ch. NR 507.					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(iii) 2 monthly rounds for VOCs, plus 2 additional sampling rounds for any wells that have VOC concentrations above their limit of detection.					
SUBSURFACE DATA ANALYSIS - s. NR 512.10					
(1) **Soil and bedrock descriptions:**					
(a) Have grain size distributions, geologic origin, USCS classification been provided for each major soil unit?					
(b) Does the report describe the lateral and vertical extent of each major soil unit including descriptions of any lenses or other heterogeneities, and if bedrock was encountered by borings, the strike and dip of any rock formations?					
(c) Does the report describe the presence and frequency of joints, fractures, voids, solution openings, faults or other structural features?					
(d) Does the report include a table summarizing the following testing data by major soil unit? ____ Geologic origin ____ Liquid limit ____ Sample ID number ____ Plasticity index ____ Percent gravel, sand, silt and clay ____ Percent P200 content ____ Lab & field hydraulic conductivities ____ Statistical analyses for averaged values					
(2) **Hydrogeologic properties and functions:** Does the report discuss the following properties and functions of each saturated soil unit or rock formation? ____ Hydraulic conductivity ____ Role as a confining unit ____ Hydraulic connections to other units ____ Horizontal & vertical gradients ____ Actual/potential use as a water supply unit ____ Depth to groundwater & seasonal variations in groundwater elevations ____ Location & extent of perched groundwater ____ Local & regional flow directions including the locations of groundwater divides					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(3) Appendix: Does the Appendix include the following? ____ All raw data ____ Soil boring log information forms 4400-122 ____ Well information forms (4400-89) ____ Groundwater and surface water level measurements ____ Monitoring well development forms (4400-113B) ____ Baseline groundwater quality sampling ____ Monitoring well construction forms (4400-113A) ____ Soil test results ____ Well/drillhole/borehole abandonment forms 3300-5B ____ Storm water control form					
DATA PRESENTATION - s. NR 512.11					
Are the results from the subsurface investigation presented on 24" x 36" plan sheets?					
(1) **Existing conditions plan sheet:** Is a detailed topographical survey of all areas within 1500 feet of the proposed limits of filling provided (minimum scale 1" = 200' with maximum 2 foot contour interval) and does it show all of the following? ____100-year floodplain area ____Surface waters, including intermittent & ephemeral streams & wetlands ____Residences, buildings, utility lines & other cultural features ____Surrounding land uses (residential, commercial, agricultural & recreational) ____Property & proposed limits of filling, including any previous fill areas ____Access control (fences & gates) ____Water supply wells (public, private, irrigation, & stock) ____Boring, test pit, and well locations ____Other structures (storm water control systems, agricultural drain tile systems, access & internal roads, storm & sanitary sewerage systems)					
(2) Geologic cross-sections: (a) Have geologic cross-sections been constructed as follows? ____Through <u>all</u> borings, both perpendicular and parallel to the proposed landfill's baseline ____If a proposed contiguous expansion, through all previous borings for the existing landfill ____1 cross-section parallel to groundwater flow					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(b) Is the following information included on the cross-sections? ____Inferred/questionable lithostratigraphic boundaries shown with a dashed line or question mark ____Number/symbol to label major soil units with key which describes each major soil unit including geologic description and origin, USCS classification and color ____Boring logs showing USCS classification, geologic origin, grain size analyses, Atterberg limits, and field hydraulic conductivities ____Well construction details, well screen & filter pack length, upper & any lower seals, water levels measured on same date ____Water table surface and date water level measurements taken (if two or more observation wells are shown)					
(3) Water table maps:					
(a) Are at least two water table maps (seasonal high & low) provided?					
(b) For a proposed contiguous expansion, do the water table maps include the observation wells and measured water table elevations for each observation well for the existing landfill?					
(c) Has a bedrock piezometric map been provided if 3 or more bedrock wells have been installed?					
(4) Has a ***bedrock contour map*** been provided if 3 or more borings have been drilled into bedrock?					
(5) Has a ***flow net***, parallel to the direction of groundwater flow to show distribution of recharge & discharge been provided?					
WASTE AND LEACHATE CHARACTERIZATION - s. NR 512.12					
(1) **Industrial wastes:** Have the physical & chemical characteristics of any high volume industrial waste anticipated to individually constitute more than 5% of the total proposed design capacity and leachates been analyzed and described?					
(2) **Municipal wastes:** Does the report include actual field leachate data from existing landfills of similar size, design and waste type or an estimate of the anticipated leachate strength and quality?					
(3) **Leachate generation:** Does the report include the estimated daily volume of leachate that will be collected for unclosed and closed areas?					
CONSTRAINTS ON LANDFILL DEVELOPMENT - s. NR 512.13					
(1) Does the report contain a demonstration that the proposed landfill will meet the locational and performance standards in s. NR 504.04?					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(2) Does the report contain an analysis of the geologic, hydrogeologic, topographic, and hydrologic features of the proposed property that may be favorable or unfavorable for landfill development?					
(3) Does the report contain a discussion of the following materials and support services required for landfill construction and operation? ____Leachate treatment alternatives ____Identification and detailed evaluation of the capability of any proposed wastewater treatment plant(s) to treat the leachate ____Quality & quantity of liner and cap materials ____Specialized engineering structures to support landfilling activities					
(4) **Expansions:** For a proposed contiguous expansion, does the report discuss the compliance status and performance of the existing landfill?					
(a) Does the report reference the discussion on the compliance status and performance of the existing landfill contained in any applicable pre-feasibility report and include any changes since the submittal of that report?					
(5) **Existing conditions:** Does the report contain an exemption request under s. NR 140.28 and in accordance with s. NR 507.29 if a PAL or ES has been attained or exceeded at the site?					
PROPOSED PRELIMINARY DESIGN - s. NR 512.14					
(1) Preliminary Design Report					
(a) Does the report contain preliminary materials balance calculations for the necessary volume of clay to construct the liner and final cap of the first phase of the landfill?					
(b) Does the report discuss proposed methods for leachate and gas control? ____ Leachate collection ____ Gas collection ____ Leachate containment ____ Gas containment ____ Leachate treatment ____ Gas treatment					
(c) Does the report discuss the proposed operating procedures, including the general filling sequence?					
(d) Proposed monitoring: i. Does the report include a description of the proposed monitoring programs to be implemented to meet the requirements of chs. NR 140 and 507? ____ Groundwater ____ Air ____ Leachate ____ Unsaturated zone ____ Surface Water ____ Other monitoring ____ Gas					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
ii. Does the report contain a sampling plan for all monitoring devices in accordance with s. NR 507.16?					
(e) Storm water controls and screening: i. Does the report discuss the proposed methods for storm water control in accordance with ch. NR 216?					
ii. Does the report discuss visual screening?					
(f) Does the report discuss the proposed final use?					
(2) Preliminary Engineering Plans (24" x 36" Plan Sheets w/max. 5 foot contours):					
(a) Does the report include an existing conditions map that shows the following? ____ Proposed access ____ Associated buildings ____ Limits of filling ____ Storm water diversions ____ Internal roads ____ Sedimentation basins ____ Load out & scale facilities ____ Phase of facility development ____ Sub-base & base grades ____ Slopes ____ Leachate collection system ____ Leachate storage tank ____ Lift station/sewer hook up					
(b) Does the report include geologic cross-sections plan sheet(s) that display the following information? ____ Present topography ____ Proposed final grades ____ Proposed sub-base grades ____ Liner and final cap configuration ____ Proposed base grades					
(c) Does the report include a plan sheet showing the proposed closure sequence and final grades?					
IDENTIFICATION AND CHARACTERIZATION OF BORROW SOURCES - s. NR 512.15 Note: It may be necessary to obtain federal, state and/or local permits prior to excavating soil from a borrow source near surface waters or wetlands. For example, s. 30.19(1)(c), Stats., requires a permit for grading or removing top soil from the bank of any navigable stream, lake or body of navigable water where the area exposed by such grading or removal will exceed 10,000 square feet. It is the responsibility of the applicant or property owner to request an initial site inspection in accordance with ch. NR 509 and to obtain any federal, state and/or local permits that are required.					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(1) General information: i. Does the report include a copy of the department's initial site inspection letter and a general discussion of the following concerning the proposed borrow source(s) needed to construct, operate and close the first phase of the landfill? ____Total acreage ____Ownership ____Location (¼-¼ section) ____Present land use ____Transportation routes ____Any access restrictions ____Travel distance from proposed site ____Surface water drainage patterns ____Significant hydrologic features ____Critical habitat ____State/local natural areas ____Historical/archaeological areas					
ii. If the proposed clay borrow source(s) contains less than a five foot uniform clay thickness, does the report contain a construction methodology and documentation procedure to ensure the liner meets the requirements of s. NR 504.06(2)(a)?					
(2) Field and laboratory investigations for proposed clay borrow source(s): Note: Sections (a) and (b) below do not apply if the necessary clay soil is to be obtained from the proposed or approved limits of filing.					
* Has an alternate geotechnical investigation program been approved by the department in writing? __ yes __ no ** If yes, does the report include a copy of and justification for any approved alternative geotechnical investigation program?					
(a) Have the required number of test pits or borings been completed on a uniform grid pattern across the proposed borrow source(s)? i. 10 test pits/borings for the first 5 or less acres ii. 1 additional test pit/boring for each additional 3 or less acres _____ Proposed acreage of proposed borrow source(s) _____ Number of test pits/borings required _____ Number of test pits/borings made					
iii. Have logs identifying geologic origin, testing results, USCS classification, and visual description of each major soil unit encountered also been included?					
(b) Does the report include Atterberg limits and grain size analyses to 0.002 mm particle size for 2 samples from each test pit/boring?					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(c) Does the report include the relationship of water content to dry density using either the modified or standard Proctor method (curves must be developed with a minimum of 5 points) for 1 sample from each major soil unit and no fewer than 3 samples for uniform clay deposits?					
(d) Does the report include laboratory hydraulic conductivity test results for each sample used to develop the Proctor curves?					
(3) Does the report include the following data for all proposed noncommercial clay borrow source(s)? ____Calculated volume of soil needed and the volume of acceptable soil available ____Property boundaries and test pit/boring locations on a topographic map (scale: 1" = 500') that extends a minimum of 500 feet beyond the proposed borrow source ____Isopach map showing clay thickness ____Description of methods for separating acceptable soil from unacceptable soil ____Proposal for drainage and sedimentation control ____When applicable, proposal for abandoning the property in accordance with WDOT specifications or ch. NR 135 ____All data from the testing program					
(4) Does the report include the following data for all proposed noncommercial, non-clay borrow source(s)? ____Property boundaries on a topographic map (scale of 1" = 500') that extends a minimum of 500 feet beyond the proposed borrow source. ____A proposal for maintaining drainage and sedimentation control ____When applicable, proposal for abandoning the property in accordance with WDOT specifications or ch. NR 135					
ENVIRONMENTAL REVIEW - s. NR 512.16 Note: Information provided in previous sections of the ISR, any applicable pre-feasibility report, or the feasibility report may be referenced to satisfy this section's requirements.					
(1) Does the report contain a Project Summary that includes the following? ____ Brief overview of the project ____ Listing of statutory authority ____ Relevant local, state and federal permits or approvals required ____ Need for exemptions, zoning changes & other special permits or approvals					
(2) Does the report contain a brief description of the proposed physical changes that includes all of the following?					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(a) Changes in terrestrial resources such as: i. Soil quantities: ____Quantity of soil to be excavated and the lateral extent of soil removal ____Quantity and source of soils designated to be used in the construction, operation or closure of the landfill					
ii. Earthen modifications: ____Clearing & grubbing ____Excavation ____Soil placement needed to reach the proposed sub-base grades ____Construction of access roads ____Stockpiles ____Storm water controls					
(b) Changes in aquatic resources such as: i. Potential impacts to streams, wetlands, ponds, lakes & flowages ii. Discharge rates and volumes under existing conditions as well as that anticipated during active operations and following closure for: ____Groundwater control structures ____Leachate collection systems ____Storm water control structures iii. Information or reports on how the proposed landfill and soil borrow sources for the first phase of the proposed landfill comply with s. 30.19 Stats., and ch. NR 103.					
(c) Structures, including the size of the facilities and the miles of road, to be constructed such as: ____Buildings ____Treatment units ____Roads ____Sedimentation basins ____Fences					
(d) Emissions and discharges associated with landfill preparation, construction, operation, closure and post-closure of the landfill such as: ____Dust ____Engine exhaust ____Odors ____Noise ____Gases ____Leachate ____Storm water ____Collected groundwater					
(e) Other changes anticipated with landfill development					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(f) Maps, plans and other descriptive material to clarify the discussion such as: ____County map ____Proposed service area map ____USGS map ____Plat map ____Zoning map ____County wetlands map ____Soils map ____Landfill development plan					
(3) Does the report contain a brief description of the existing environment that may be affected that includes the following?					
(a) A description of the physical environment including: ____Regional & local topography ____Geology ____Surface waters & drainage features ____Hydrogeologic conditions ____Air quality ____Wetlands ____Designated soil borrow sources					
(b) Dominant aquatic and terrestrial plant and animal species and habitats found in the area including: ____Any threatened/endangered species ____Amount, type & hydraulic value of wetlands					
(c) Land use including dominant features and zoning in the area					
(d) Social and economic conditions including any ethic or cultural groups					
(e) Other special resources such as: ____Archaeological ____Historical ____State/local natural areas____Prime agricultural lands					
(4) Does the report contain a brief discussion of the probable adverse and beneficial impacts including primary, indirect and secondary impacts that includes the following?					
(a) Physical impacts associated with landfill design, construction and operation, including: ____Air quality ____Windblown paper ____Dust ____Visual impacts					
(b) Biological impacts including: ____Destruction and creation of habitat ____Alteration of the physical environment ____Impacts to endangered/threatened species					
(c) Impacts on land use					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(d) Social and economic impacts to local residents and cultural groups and the communities and industries to be served by the landfill such as effects on: ____Taxes ____Traffic & roads ____Noise ____Consistency with local planning & zoning					
(e) Other special resources such as: ____Archaeological ____Historical ____State/local natural areas____Prime agricultural lands					
(f) Probable adverse impacts that cannot be avoided including: ____Groundwater/surface water impacts ____Modifications of topography ____Soil borrow source limitations on development around the landfill ____Loss of agricultural or forest land ____Displacement of wildlife ____Adverse aesthetic impacts for people in and around the landfill					
(5) Does the report identify, describe and discuss feasible alternatives? (a) Alternatives ____Taking no action ____Enlarging the project ____Reducing/modifying the project to mitigate impacts ____Other landfills/locations/methods to the proposed action and their impacts					
(b) Has particular attention been given to alternatives which might avoid some or all adverse environmental impacts, including planned and existing waste reduction & recycling, incineration, solid waste disposal, and transfer facilities that may serve to handle the waste expected to be disposed of at the proposed landfill, taking into account the economics of waste collection, transportation and disposal?					
NEED AND DESIGN CAPACITY - s. NR 512.17 Note: In determining the design capacity of the proposed landfill under s. 289.29(1)(d), Stats., the department considers the effect of planned and existing waste reduction and recycling activities and other existing or proposed competing solid waste facilities, regardless of whether or not the other facilities are located within the service area, as defined under s. 289.28(1), Stats., of the proposed landfill.					
(1) Is the proposed landfill exempt under s. 289.28(2)? __ yes __ no					
(2) Does the report include the Information specified in s. 289.28(1), Stats.?					
(a) An approximate service area for the proposed facility which takes into account the economics of waste collection transportation and disposal.					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(b) The quantity of waste suitable for disposal at the proposed facility generated within the anticipated service area.					
(c) The design capacity of the following facilities located within the anticipated service area:					
(i) Approved facilities, including the potential for expansion of those facilities on contiguous property owned or controlled by the applicant.					
(ii) Nonapproved facilities which are environmentally sound.					
(III) Other proposed facilities for which feasibility reports are submitted and determined to be complete by the department.					
(iv) Facilities for the recycling of solid waste or for the recovery of resources from solid waste which are licensed by the department					
(v) Proposed facilities for the recycling of solid waste or for the recovery of resources from solid waste which have plans of operation which are approved by the department.					
(vi) Solid waste incinerators licensed by the department.					
(vii) Proposed solid waste incinerators which have plans of operation which are approved by the department.					
(d) If the applicant is a municipality and the need for a proposed facility cannot be established under the criteria listed under (a) through (c) above, does the report demonstrate need based on the extent to which the proposed facility is needed to replace other facilities of that municipality at the time those facilities are projected to be closed in the plans of operation?					
(3) Identification of the following activities/facilities used to manage solid wastes generated within the anticipated service area of the proposed landfill ____Identification of existing waste reduction/recycling activities ____Identification of existing solid waste facilities ____Remaining design capacity of each facility identified					
(4) Information for the activities/facilities, identified in (2) above, for which a significant commitment or implementation or development has been made					
(5) Does the report indicate that the anticipated site life is between 10 to 15 years for a new facility or less than 15 years for an expansion? [see s. 289.29(1)(d), Stats.] __ yes __ no					
EVALUATION OF ALTERNATIVES TO LAND DISPOSAL - s. NR 512.18					
(1) Does the feasibility report contain an analysis of the alternatives to land disposal of waste, including potential and existing waste reduction, reuse, recycling, composting and energy recovery initiatives and services?					

FEASIBILITY REQUIREMENTS	COMPLETE? Y	N	NA	LOCATION	COMMENTS
(2) Does the analysis include a discussion of the trends affecting the waste stream, an estimate of the cost per ton for each alternative, when available and an evaluation of the feasibility of implementing each potential alternative?					
(3) Does the feasibility report evaluate the feasibility of implementing waste reduction initiatives and recycling services in connection with the proposed landfill and describe any waste reduction incentives and recycling services to be provided at the proposed landfill?					
COUNTY SOLID WASTE MANAGEMENT PLANS s. 289.24(1)(c), Stats.					
Does the feasibility report contain a description of how the proposed facility relates to any applicable county solid waste management plan approved under s. 289.10, Stats. **Note: Applicants must address all DNR approved County plans within their proposed service area.**					
ADVISORY AND PUBLIC OPINION PROCESS s. 289.24(1)(d)					
Does the feasibility report contain a description of the advisory process undertaken by the applicant prior to submittal of the feasibility report to provide information to the public and affected municipalities and to solicit public opinion on the proposed facility.					
INFORMATION REQUIRED BY s. 289.34, Stats. (ACT 31) Does the report contain:					
(1) An identification of all persons owning a 10% or greater legal or equitable interest in the applicant or in the assets of the applicant. This would include shareholders of a corporation which is an applicant and partners of a partnership which is an applicant.					
(2) An identification of all other Wisconsin solid or hazardous waste facilities in which any such persons identified in paragraph (1), owns or previously owned a 10% or greater legal or equitable interest or 10% or greater interest in the assets.					
(3) An identification of all other Wisconsin solid or hazardous waste facilities in which the applicant owns or previously owned a 10% or greater legal or equitable interest or a 10% or greater interest in the assets.					
(4) A statement indicating whether or not all plan approvals and orders relating to all facilities identified in paragraphs (2) and (3), above, are being complied with.					

DETERMINATION: **COMPLETE:** _____ **INCOMPLETE:** _____

_____ _____

DNR Reviewer (Signature) (Date)